AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (Original) Mixture of particles comprising a non-conducting or semi-conducting nucleus, the nuclei of said particles being at least partially covered with a hybrid conductor coating and said particles being at least partially connected through hybrid conducting chains which provide a network of electrical conductivity.

2. (Original) Mixture according to claim 1, in which the particles comprise a non-conducting or semi-conducting nucleus and a coating, at least partially made of a hybrid conductor material, and in which said particles are at least partially interconnected through hybrid conducting chains.

3. (Previously Presented) Mixture according to claim 2, in which the coating comprises a mixture of at least two different conducting materials and in particle form, some particles of the coating of a first nucleus being interconnected with particles of the coating of a second nucleus located in the mixture of particles proximate said first nucleus.

4. (Previously Presented) Mixture of particles according to claim 3, in which the coating comprises:

- a first conducting material at least partially covering the surface of said nuclei; and
- a second conducting material in which particles are connected together to constitute an electrical conductivity network.

5. (Previously Presented) Mixture according to claim 1, in which the nuclei comprise at least one phosphate, one nitride, one oxide or a mixture of two or more of them.

6. (Previously Presented) Mixture according to claim 5, in which the nucleus of said particles, in major portion consists of at least one metal oxide.

7. (Previously Presented) Mixture according to claim 64, in which the metal oxide, for more than 65 % by weight, consists of a lithium oxide.

8. (Original) Mixture according to claim 7, in which the lithium oxide is carbon coated.

9. (Previously Presented) Mixture according to claim 6, in which the nucleus consists of a lithium oxide of spinel structure.

10. (Previously Presented) Mixture of particles according to claim 6, in which the lithium oxide is selected from the group consisting of oxides of the formula:

- $Li_4Ti_5O_{12}$;
- $Li_{(4-\alpha)}Z_\alpha Ti_5O_{12}$, in which α is higher than 0 and lower than or equal to 0.33, Z represents a source of at least one metal; and
- $Li_4Z_\beta Ti_{(5-\beta)}O_{12}$ in which β is higher than 0 and/or lower than or equal to 0.5, Z represents a source of at least one metal.

11. (Original) Mixture according to claim 10, in which at least 65 % of the nucleus of the particles consists of $Li_4Ti_5O_{12}$, $Li_{(4-\alpha)}Z_\alpha Ti_5O_{12}$, $Li_4Z_\beta Ti_{(5-\beta)}O_{12}$ or a mixture thereof, α and β having the values defined in claim 10.

12. (Previously Presented) Mixture according to claim 10, in which the nucleus of particles is a lithium oxide of spinel structure and consists of $Li_4Ti_5O_{12}$, $Li_{(4-\alpha)}Z_\alpha Ti_5O_{12}$, $Li_4Z_\beta Ti_{(5-\beta)}O_{12}$ or a mixture thereof, α and β having the values defined in claim 10.

13. (Withdrawn) Mixture according to claim 1, in which the nucleus of said particles is semi-conducting and consists of a material selected from the group consisting of Si, doped Si, or Ge, Ge and InSb.

14. (Original) Mixture according to claim 1, in which the nucleus of said particles is non conducting and consists of a material selected from the group consisting of glasses, mica and SiO_2.

15. (Original) Mixture according to claim 1, in which the particles have a D_{50} of 7 micrometers.

16. (Previously Presented) Mixture according to claim 9, in which Z represents a particle of a metal selected from the group consisting of Mg, Nb, Al, Zr, Ni and Co.

17. (Previously Presented) Mixture according to claim 10, in which the metal oxide has the formula $LiMn_{0.5}Ni_{0.5}O_2$, $LiMn_{0.33}Ni_{0.33}Co_{0.33}O_2$, $Li_4Ti_5O_{12}$, Li_2TiCO_3, $LiCoO_2$, $LiNi\,O_2$ or $LiMn_2O_4$.

18. (Previously Presented) Mixture according to claim 1 containing from 1 to 6 % by weight of carbon in said mixture.

19. (Original) Mixture according to claim 18, containing about 2 % by weight of carbon in said mixture.

20. (Previously Presented) Mixture according to claim 1, in which the coating consists of a hybrid mixture of carbon, and/or a carbon-metal hybrid mixture.

21. (Withdrawn) Mixture according to claim 20, in which the metal is selected from the group consisting of silver, aluminum and mixtures thereof.

22. (Original) Mixture according to claim 20, in which the hybrid carbon mixture comprises at least two different conducting forms of carbon, hereinafter designated Carbon 1 and Carbon 2.

23. (Original) Mixture according to claim 22, in which Carbon 1 is a low crystallinity carbon.

24. (Original) Mixture according to claim 23, in which the crystallinity of the particles of Carbon 1, measured by X-ray diffraction and/or by Raman spectroscopy, is characterized par a d_{002} higher than 3.36 Angströms.

25. (Previously Presented) Mixture according to claim 22, in which Carbon 2 is a graphite and/or a high crystallinity carbon.

26. (Original) Mixture according to claim 25, in which the crystallinity of the particles of Carbon 2, measured by X-ray diffraction is characterized by a d_{002} lower than 3.36 Angströms.

27. (Original) Mixture according to claim 26, in which Carbon 2 is a natural graphite, a synthetic graphite or an exfoliated graphite.

28. (Previously Presented) Mixture according to claim 22, in which Carbon 1 has a specific surface area, measured according to the BET method, that is higher than or equal to 50 m^2/g.

29. (Original) Mixture according to claim 28, in which the particles of Carbon 1 that are used have an average size that varies from 10 to 999 nanometers.

30. (Previously Presented) Mixture according to claim 22, in which the particles of Carbon 2 have a specific surface area measured according to the BET method, that is lower than or equal to 50 m^2/g.

31. (Previously Presented) Mixture according to claim 22, in which the particles of carbon 2 that are used, have a size that varies from 2 to 10 micrometers.

32. (Previously Presented) Mixture according to claim 22, in which Carbon 2 consists of at least one graphite selected from the group consisting of synthetic graphite, natural graphite, exfoliated graphite and mixtures of two or more of these graphite.

33. (Previously Presented) Mixture according to claim 22, in which the weight percentage of Carbon 1 represents from 1 to 10% of the total weight of the coating composed of Carbon 1 and Carbon 2.

34. (Previously Presented) Mixture according to claim 22, in which the quantity of Carbon 1 is substantially identical to the quantity of Carbon 2.

35. (Previously Presented) Mixture according to claim 1, in which the average diameter of the nucleus of said particles varies from 50 nanometers to 30 micrometers.

36. (Original) Mixture according to claim 35, characterized in that the average diameter of said nucleus is of the order of 2 micrometers.

37. (Previously Presented) Mixture according to claim 1, in which the average size of said particles, measured according to the electronic scanning microscope method, is between 4 and 30 micrometers.

38. (Previously Presented) Mixture according to claim 1, having at least one of the following properties: a very good local conductivity, a very good network conductivity, a low resistivity, a very good capacity under elevated current and a good density of energy.

39. (Previously Presented) Mixture according to claim 36, having a local conductivity, measured according to the four point method, that is higher than 10^{-6} (Ohm-m).

40. (Previously Presented) Mixture of particles according to claim 38 having a network conductivity, measured according to the four point method, that is between 2.6×10^{-3} and 6.2×10^{-3}.

41. (Previously Presented) Process for preparing a mixture of particles such as defined in claim 1, comprising at least one of the following steps:

a) preparation of a mixture of at least one non-conducting or semi-conducting material with a conducting material, and the addition of a second conducting material to the mixture obtained;
b) preparation of a mixture of at least one non-conducting or semi-conducting material with at least two conducting materials; and
c) preparation of a mixture of conducting materials and mixing thereof with at least one non-conducting or semi-conducting material.

42. (Previously Presented) Process for preparing a mixture of particles according to claim 41, in which mixing of materials is carried out by mechanical crushing of the type HEBM, Jar milling, or Vapor jet milling.

43. (Previously Presented) Process for preparing a mixture of particles according to claim 41, carried out at a temperature lower than 300 degrees Celsius.

44. (Previously Presented) Process for preparing a mixture of particles according to claim 41, in which the nuclei of said particles are based on $Li_4Ti_5O_{12}$ and the coating is based on a mixture of carbon, mixing of carbon being carried out chemically, before the step of synthesing particles of $Li_4Ti_5O_{12}$.

45. (Previously Presented) Process according to claim 41, in which at least one of the conductor materials (Carbon 1) is obtained by thermal treatment of a polymer type precursor.

46. (Original) Process according to claim 45, in which the polymer is selected from the group consisting of natural polymers, modified natural polymers as well as mixtures thereof.

47. (Original) Process according to claim 46, in which the polymer is selected from the group consisting of sugars, chemically modified sugars, starches, chemically modified starches, gelatinized starches, chemically modified starches,

chemically modified and gelatinized starches, cellulose, chemically modified cellulose and mixtures thereof.

48. (Original) Process according to claim 47, in which the polymer is a cellulose acetate.

49. (Previously Presented) Process according to claim 44, in which mixing of carbon is carried out by physical admixing, after $Li_4Ti_5O_{12}$ synthesis.

50. (Withdrawn) Cathode for electrochemical generator comprising a mixture of particles as defined in claim 1.

51. (Withdrawn) Anode for electrochemical generator comprising particles as defined in claim 1.

52. (Withdrawn) Electrochemical generator of the lithium type including at least one metallic lithium anode and at least one cathode as defined in claim 50.

53. (Withdrawn) Electrochemical generator according to claim 52, preferably of the rechargeable and/or recyclable type.

54. (Withdrawn) Electrochemical generator of the lithium type including at least one metallic lithium anode as defined in claim 50, at least one cathode and comprising at least one electrolyte.

55. (Withdrawn) Electrochemical generator according to claim 52, in which at least one anode and/or at least one cathode are provided with an aluminum current collector that is full or of the Exmet type (expanded metal).

56. (Withdrawn) Electrochemical generator according to claim 52 requiring no previous preparation of the battery.

57. (Withdrawn) Generator according to claim 52, in which the electrolyte is a dry polymer, a gel, a liquid or a ceramic.

58. (Withdrawn - Currently Amended) Hybrid type ~~supercapacity~~ supercapacitor comprising at least one electrolyte, at least one anode, as defined in claim 51, and at least one cathode of the graphite or large surface area carbon type, requiring no previous preparation of the supercapacitor.

59. (Withdrawn - Currently Amended) ~~Supercapacity~~ supercapacitor according to claim 58, in which at least one anode and/or at least one cathode are provided with an aluminum current collector that is full or of the Exmet type (expanded metal).

60. (Withdrawn - Currently Amended) ~~Supercapacity~~ supercapacitor according to claim 59, in which the electrolyte is a dry polymer, a gel, a liquid or a ceramic.

61. (Withdrawn) Electrochemical system according to claim 52, characterized in that the electrode is prepared without any addition of additional carbon.

62. (Previously Presented) Mixture according to claim 4, in which between 50 and 90% of the first conducting material is covering the surface of said nuclei; and between 10 and 50% of the particles of the second conducting material are connected together to constitute an electrical conductivity network.

63. (Previously Presented) Mixture according to claim 4, in which about 80% of the first conducting material is covering the surface of said nuclei; and about 20% of the particles of the second conducting material are connected together to constitute an electrical conductivity network.

64. (Previously Presented) Mixture according to claim 6, in which the nucleus of said particles consists for at least 70% of at least one metal oxide.

65. (Previously Presented) Mixture according to claim 36, having a local conductivity, measured according to the four point method, that is higher than or equal to 10^{-5} (Ohm-m).

66. (Previously Presented) Mixture of particles according to claim 38 having a network conductivity, measured according to the four point method, that is lower than 6.0×10^{-03} (Ohm-m).

67. (Previously Presented) Process for preparing a mixture of particles according to claim 41, in which mixing of materials is carried out by mechanical crushing of the type HEBM.

68. (Previously Presented) Process for preparing a mixture of particles according to claim 41, carried out at a temperature between 20 and 40° Celsius.

69. (Previously Presented) Process for preparing a mixture of particles according to claim 41, carried out at room temperature.

70. (Withdrawn) Cathode for electrochemical generator comprising a mixture of particles capable of being obtained by a process according to claim 41.

71. (Withdrawn) Cathode for electrochemical generator comprising a mixture of particles comprising a non-conducting or semi-conducting nucleus, the nuclei of said particles being at least partially covered with a hybrid conductor coating and said particles being at least partially connected through hybrid conducting chains which provide a network of electrical conductivity and particles capable of being obtained by a process according to claim 46.

72. (Withdrawn) Anode for electrochemical generator comprising particles capable of being obtained by a process according to claim 41.

73. (Withdrawn) Anode for electrochemical generator comprising particles comprising a non-conducting or semi-conducting nucleus, the nuclei of said particles

being at least partially covered with a hybrid conductor coating and said particles being at least partially connected through hybrid conducting chains which provide a network of electrical conductivity and particles capable of being obtained by a process according to claim 41.

74. (Withdrawn) Electrochemical generator according to claim 52, in which the anode is of the $Li_4Ti_5O_{12}$ and/or $Li_{(4-\alpha)}Z_\alpha Ti_5O_{12}$ and/or $Li_4Z_\beta Ti_{(5-\beta)}O_{12}$ type.

75. (Withdrawn) Electrochemical generator according to claim 54, in which the anode is of the $Li_4Ti_5O_{12}$ and/or $Li_{(4-\alpha)}Z_\alpha Ti_5O_{12}$ and/or $Li_4Z_\beta Ti_{(5-\beta)}O_{12}$ type; and the cathode is of the $LiFePO_4$, $LiCoO_2$, $LiMn_2O_4$ and/or $LiNiO_2$ type.

76. (Withdrawn - Currently Amended) Hybrid type ~~supercapacity~~ supercapacitor comprising at least one electrolyte, at least one anode, of the $Li_4Ti_5O_{12}$ and/or $Li_{(4-\alpha)}Z_\alpha Ti_5O_{12}$ and/or $Li_4Z_\beta Ti_{(5-\beta)}O_{12}$ type and at least one cathode of the graphite or large surface area carbon type, requiring no previous preparation of the supercapacitor.